

What is claimed is:

1. An implantable cardiac rhythm management device comprising a defibrillation energy delivery circuit including:
 - 5 an input terminal to receive defibrillation energy;
 - an output terminal to deliver the defibrillation energy; and
 - means for delivering the defibrillation energy from the input terminal to the output terminal, including means for conducting and latching in a single quadrant of a current versus voltage characteristic.
- 10 2. The device of claim 1, wherein the means for delivering the defibrillation energy includes means for triggering the conduction.
3. The device of claim 2, further including a switch coupled to the means for triggering the conduction, wherein the switch supplies a current to trigger the conduction.
- 15 4. The device of claim 3, wherein the switch is a current-limiting field effect transistor.
- 20 5. The device of claim 3, wherein the means for conducting and latching in a single quadrant includes means for conducting and latching in a third quadrant corresponding to a negative current and a negative voltage.
- 25 6. The device of claim 1, wherein the means for delivering the defibrillation energy includes a thyristor.

7. The device of claim 1, wherein the system includes:
a second input terminal to receive a power supply; and
a switching means to couple the first output terminal to the second input
terminal.

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8. The device of claim 7, wherein the switching means includes insulated gate
bipolar transistors (IGBTs).

9. A cardiac rhythm management device comprising a defibrillation energy
10 delivery circuit including:
a first input terminal to receive defibrillation energy;
first and second output terminals to deliver the defibrillation energy;
a first single quadrant thyristor coupled to the first input terminal and the first
output terminal;

15 a second single quadrant thyristor coupled to the first input terminal and the
second output terminal; and
switching means coupled to the first and second thyristors to trigger
conduction of the thyristors.

20 10. The system of claim 9, wherein each of the thyrsitors includes a gate, and the
switching means is coupled to the gates of the thyristors.

11. The system of claim 10, wherein the switching means sinks a current at the
gates of the thyristors.

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12. The system of claim 11, wherein the switching means includes a pull down
switch.

13. The system of claim 11, wherein the switching means includes a current
30 limiting field effect transistor (NFET).

14. A method for delivering energy used in defibrillation therapy comprising:
providing defibrillation energy at an input terminal; and
triggering a power supply coupling switch to conduct and latch current in a
5 single quadrant of a current versus voltage characteristic from the input terminal to an
output terminal for use in the defibrillation therapy.
15. The method of claim 14, wherein triggering a power supply coupling switch
includes triggering a thyristor.
- 10 16. The method of claim 15, wherein triggering the thyristor includes enabling
third quadrant conduction.
17. The method of claim 15, wherein triggering the thyristor includes providing a
15 current to a gate of the thyristor.
18. The method of claim 17, wherein providing a current includes limiting the
current to a predetermined approximate value.
- 20 19. The method of claim 14, wherein the method further includes:
providing a ground voltage at a second output terminal; and
enabling a pulldown switch to couple the second output terminal to ground.
20. The method of claim 19, wherein enabling a pull-down switch is executed
25 before triggering the power supply coupling switch.